



PAINT-PELLET GUN

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a paint-pellet gun, particularly to one bored under its pellet case base with two through holes respectively installed therein with an emitting electric eye and a receiving electric eye which are respectively connected with a shooting control system and have their outer sides respectively covered with a covering plate. Thus, only when paint pellets are surely moved in the trajectory to let the emitting electric eye emit a light beam and the receiving electric eye receive and induce this light beam through reflection of the paint pellets, or only when induction of the emitting electric eye and the receiving electric eye is obstructed by paint pellets, can the shooting control system be started to carry out pushing and shooting of the paint pellets, safe in shooting and preventing paint pellets from cracking in the trajectory and causing deadlock.

2. Description of the Prior Art

Paint-pellet sport is a healthful and leisure activity suitable for people of different levels. Substantially, paint-pellet sport is an outdoor activity requiring both physical strength and intelligence, safe in playing and conforming to environmental protection and also enabling participators to experience tension, excitement and enjoyment.

Generally, a paint-pellet gun has inner paint pellets driven forward and shot out by inner high-pressure gas, such as carbon dioxide or nitrogen or the like. The paint pellet has its outer shell treated by special process and its inner contents are a mixture of non-poison olive oil and

edible pigment. When the paint pellet flies and collides with something hard, it will instantly be cracked and have the inner paint left on the impact area.

In using, paint pellets in a funnel-shaped container provided at the 5 topside of the paint-pellet gun are moved in the trajectory and then an operator pulls the trigger to make the shooting control system push forward the paint pellets and shoot them out.

However, in case an operator starts to pull the trigger before the paint pellets are surely moved in the trajectory, the paint pellet will be 10 cracked in the trajectory and its inner liquid paint will stick therein, rendering paint pellets deadlocked and unable to be shot out. In this case, the paint dregs stuck to the inner wall of the trajectory must be cleaned out so that the paint- pellet gun can continuously be used, affecting the interest and enthusiasm of the participants.

15 SUMMARY OF THE INVENTION

A first objective of the invention is to offer a paint-pellet gun provided with an emitting electric eye and a receiving electric eye. Only when paint pellet are surely moved in the trajectory to let the emitting electric eye emit a light beam, and the receiving electric eye receives and 20 induces this light beam through reflection of the paint pellets, can a shooting control system be started to carry out shooting of the paint pellets, preventing paint pellets from cracking in the trajectory and causing subsequent deadlock.

A second objective of the invention is to offer a paint-pellet gun 25 provided with an emitting electric eye and a receiving electric eye. Only when paint pellets are surely moved in the trajectory to obstruct induction of the emitting and the receiving electric eye, can the shooting control

system be started to carry out shooting of the paint pellets.

A first feature of the invention is two through holes and a threaded hole bored in one side under the pellet case base of the gun body. The two through holes are respectively installed therein with an emitting electric eye and a receiving electric eye which are connected with a shooting control system by a power line and have their outer sides covered with a covering plate.

A second feature of the invention is two opposed through holes and two opposed threaded holes respectively bored in the opposite sides under the pellet case base of the gun body. The two opposed through holes are respectively installed therein with an emitting electric eye and a receiving electric eye which are connected with a shooting control system and have the outer sides respectively covered with a covering plate.

BRIEF DESCRIPTION OF DRAWINGS

This invention will be better understood by referring to the accompanying drawings, wherein:

Fig. 1 is an exploded perspective view of a first preferred embodiment of a paint-pellet gun in the present invention;

Fig. 2 is an upper view of the assembly of the emitting electric eye and the receiving electric eye in the first preferred embodiment of the paint-pellet gun in the present invention;

Fig. 3 is a partial upper view of the first preferred embodiment of the paint-pellet gun in the present invention, showing that the emitting electric eye emits a light beam and the receiving electric eye receives and induces the light beam through refraction of the paint pellet;

Fig. 4 is an exploded perspective view of a second preferred embodiment of a paint-pellet gun in the present invention;

Fig. 5 is a partial upper view of the second preferred embodiment of the paint-pellet gun in the present invention, showing that the emitting electric eye emits a light beam the receiving electric eye receives and induces the light beam; and,

5 Fig. 6 is a partial upper view of the second preferred embodiment of the paint-pellet gun in the present invention, showing that the paint pellets in the trajectory obstruct induction of the emitting electric eye and the receiving electric eye.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

10 A first preferred embodiment of a paint-pellet gun in the present invention, as shown in Figs. 1, 2 and 3, includes a gun body 1, an emitting electric eye 2, a receiving electric eye 3 and a covering plate 4 combined together.

15 The gun body is bored with two through holes 11 and a threaded hole 12 in one side under its pellet case base 10, with the two through holes 11 respectively positioned slanting inward at an acute angle.

20 The emitting electric eye 2 and the receiving electric eye 3 are respectively installed in the two through holes 11, which have their outer ends respectively sealed up by an O-shaped ring 20, 30. The emitting electric eye 2 and the receiving electric eye 3 are respectively connected with a shooting control system (not shown) by a power line 21, 31.

The covering plate 4 is covered around the outer side of the emitting electric eye 2 and the receiving electric eye 3 and fixed on the gun body 1 by a bolt 5.

25 The paint-pellet gun in the present invention carries out shooting by reflecting induction. When paint pellets 6 are moved in the trajectory to let the emitting electric eye 2 emit a light beam, the receiving electric eye

3 will synchronously receive and induce this light beam through refraction of the paint pellets and actuate the shooting control system to push forward the paint pellets 6 and shoot them out. On the contrary, when there are no paint pellets 6 in the trajectory, the light beam emitted by the
5 emitting electric eye cannot be refracted and received by the receiving electric eye 3, and therefore the shooting control system cannot be started to carry out shooting, safe in shooting and preventing paint pellets from cracking in the trajectory and causing deadlock.

A second preferred embodiment of a paint-pellet gun in the
10 present invention, as shown in Figs. 4, 5 and 6, includes a gun body 1, an emitting electric eye 7, a receiving electric eye 8 and two covering plates 9 combined together.

The gun body 1 has two opposed through holes 11 and two opposed threaded holes 12 respectively bored in the opposite sides under
15 its pellet case base 10.

The emitting electric eye 7 and the receiving electric eye 8 are respectively installed in the two opposed through holes 11 having their outer ends respectively sealed up with an O-shaped ring 70, 80. The emitting electric eye 7 and the receiving electric eye 8 are respectively
20 connected with a shooting control system 9 (not shown).

The two covering plates 9 are respectively covered around the outer side of the emitting electric eye 7 and the receiving electric eye 8 and fixed on the gun body 1 by two bolts 5 respectively screwed in the two threaded holes 12 in the opposite sides of the gun body 1.

25 By so designing, when the emitting electric eye 7 emits a light beam and the receiving electric eye 8 receives and induces this light beam, the shooting control system will be motionless and unable to carry out pushing and shooting of paint pellets 6. Only when the paint pellets 6

are surely moved in the trajectory to obstruct induction of the emitting electric eye 7 and the receiving electric eye 8, can the shooting control system act to push the paint pellets 6 and shoot them out, thus preventing paint pellets 6 from cracking in the trajectory and causing subsequent
5 deadlock.

While the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications that may fall within the spirit and scope of
10 the invention.

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